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ABSTRACT

Quality education in an information society must include skills related to the accessing and evaluating of pertinent information for problem solving. Moving beyond the practice of using reserve material, lectures, and textbooks predominant in most college teaching today would be a step towards producing independent learners more likely to use the wide range of materials available through campus libraries. However, a campus statement of educational philosophy and strong institutional leadership are necessary to bridge the gap between the classroom and library and incorporate the library as a vital part of the undergraduate experience. The high value of library-based instruction can be shown through an examination of the generally accepted characteristics of quality learning/teaching experiences, which indicates that library-based instruction encompasses the important learning elements of being an imitation of reality, being active rather than passive, being individualized, providing for a variety of learning styles, being up-to-date, and providing a nonthreatening environment. Only when classroom instructors and librarians cooperate in library-based learning, however, can such learning experiences be structured and implemented so as to achieve the best results. Successful programs that have already closed the gap between the library and the classroom may serve as models of quality undergraduate education in the information society. (KM)

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LIBRARIES AND LEARNING
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LIBRARIES AND THE SEARCH FOR ACADEMIC EXCELLENCE

by
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Since November of 1983 and the publication of A Nation at Risk,[1] there has been a steady stream of reports issued on the condition of education in the United States. The issues raised in this current reform movement are not new,[2] but what is significantly different from earlier reform efforts is the omnipresence of the Information Age. Yet, although academic libraries constitute the point of access to most information on campuses, they have been largely ignored.

One exception was Frank Newman's 1985 report for the Carnegie Foundation for the Advancement of Teaching.[3] This effort does not address the instructional potential of libraries beyond the suggestion that not all learning need take place in classrooms but that "more imaginative use of the library, laboratories and other learning opportunities can contribute greatly" (p. 64). The report, however, does deal with concerns regarding gaining access to materials within the information explosion.

It was not until November of 1986 with the reporting of the Carnegie Foundation Report on Colleges in the Chronicle of Higher Education[4] that there was any acknowledgement of a direct relationship between libraries and quality undergraduate education. The Report stated:

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> The quality of a college is measured by the resources for learning on the campus and the extent to which students become independent, self-directed learners. And yet we found that today, about one out of every four undergraduates spends no time in the library during a normal week, and 65 per cent use the library four hours or less each week.
>
> The gap between the classroom and the library, reported on almost a half-century ago, still exists today.
>
> o The college library must be viewed as a vital part of the undergraduate experience. Every college should establish a basic books library to serve the specific needs of the undergraduate program.
>
> o All undergraduates should be introduced carefully to the full range of resources for learning on a campus. They should be given bibliographic instruction and be encouraged to spend at least as much time in the library--using its wide range of resources--as they spend in classes.

The education imperatives, which are addressed here in terms of library use, have been largely the same throughout the reform reports. People need to be prepared for lifelong learning and involved citizenship, which in turn equates with a more active learning process. On an intellectual level faculty and academic officers accept the fact that lectures, textbooks, materials put on reserve, and tests which ask students to regurgitate back information from these sources do not make for an active, much less a quality, learning experience. To this intuitive base must also come the acknowledgement that:

> ...the curve for forgetting course content is fairly steep: a generous estimate is that students forget 50% of the content within a few months...A more devastating finding comes from a study that concluded that even under the most favorable conditions, "students carry away in their heads and in their notebooks not more than 42% of the lecture content..." Those were the results when students were told that they would be tested immediately following the lecture; they were permitted to use their notes; and they were given a prepared summary of the lecture. These results were bad enough, but when students were tested a week later, without the use of their notes, they could recall only 17% of the lecture material.[5]

Given the rapidly shrinking half-life of information, even the value of that 17% which is remembered must be questioned. To any thoughtful educator it must be clear that now and forevermore teaching facts will be a poor substitute for teaching people how to learn, i.e., giving them the skills to be able to locate, evaluate and effectively use information for any given need. Yet change is slow in coming; and the centers for information on campuses, the academic libraries, are largely ignored in addressing this challenge.

The response of the University of Colorado (CU) to the recognition of the Information Society which occurred in the late 70's was very much like other institutions across the country. It quickly, for an academic institution, established computer literacy course requirements on its campuses which, to a large extent, emphasized computer programming. At the time this was occurring, librarians on the three general campuses produced a thought paper raising the broader issue of information literacy, but their effort was ignored. Libraries were passé; computers were "sexy." Now the combination of the current concern for reform in undergraduate education and our knowledge that computer literacy, as initially defined, has proven inadequate is causing a fresh look at information literacy at the University of Colorado.

How can higher education effectively address the challenges of the Information Society? Can higher education, which is only now beginning to use television effectively, incorporate the implications of this Age of

Information into its operations and instruction? If computer programming is not an appropriate much less an adequate response to the challenges of the Information Society, what is?

College catalogs have alluded to an obvious answer for years. Regularly, academic institutions cite the importance of students learning how to think effectively and have guaranteed that their graduates will be able to analyze and synthesize well as part of effective problem solving. BUT seldom has anyone questioned the value of people being able to analyze and synthesize well if they cannot discern whether or not they are starting with an accurate or adequate information base. Quality education in an Information Society must include skills related to the accessing and evaluating of pertinent information for problem solving. "Garbage in--garbage out" does apply as well for human thinking as for use of computers, and for human thinking the concerns are even broader since they must encompass quality issues such as propaganda and cultural biases.

Underlying the new challenges of the Information Society then is the need to foster the development of information literate people; and, one would hope in more prestigious institutions the commitment would go beyond competency levels to graduating effective information consumers. So essential is the ability to gather information independently and appropriately that a case could be made for expanding the definition of literacy to include the accessing, retrieving, and evaluating of information. In an era when today's "truths" become tomorrow's outdated concepts, individuals who are unable to gather pertinent information are equally as illiterate as

those who are unable to read or write. The college educated person can no longer rely on previous knowledge, textbooks and faculty to provide the information necessary to make informed judgments; no one person or even group of individuals is capable of assimilating all the information tha. is available or of keeping abreast with new information as it is created. Instead, the ability to independently and appropriately gather information will determine mobility, and ultimately, the upper range of the continuum of literacy itself; and the provision of the opportunity to master this aspect of literacy, rather than computer programming, must be center to higher education's response to the challenges of the Information Age.

Why has higher education limited itself to computer rather than information literacy? Why are not libraries used more effectively? At the heart of the problem seems to be a reluctance for change and the lack of a philosophy for education that effectively incorporates library resources and personnel. Before articulating the necessary ingredients for such a philosophy, time will be well spent in exploring some of the old teaching patterns and why they are so difficult to overcome.

The Reserve System, Lectures and Textbooks

President Henry Wriston (Lawrence and Brown), who fought a lifelong battle against the reserve system, believed that the library should reflect a campus' educational philosophy; which in his mind included major curtailment of the use of libraries by faculty for placing materials on reserves. The following excerpts are taken from his autobiography:[6]

> From first-hand contact I found out that the contents of the reserves shelves supplied a fairly accurate index of diminishing expectations on the part of the professor, and concrete evidence that the student was being short-changed in his education. The professors who are most successful induce students to buy books as well as to read widely from the library collections. They required writing which involved bibliographical work. Their list of reserved books was short or non-existent. (p. 133)

> The books put on the "reserve shelf" were studied with extreme care. It became manifest, after long scrutiny that more than a quarter were never called for at all. Another fifty percent were used five times or less during an entire year. The bulk of the use was concentrated in less than a quarter of the whole number. Moreover the active service of a "reserves book" usually occupied a relatively short time. Thus even those volumes which were "statistically active" were idle most of the months they were kept on reserve. This led to an astonishing discovery: many books actually circulated more often when not on reserve--a fact which astounded professors who had assumed the contrary to be true. Subsequently I tested the conclusion again and again, and always with the same results.

> For 30 years, therefore, I waged war on the reserves shelf--not to abolish it completely, but to keep it in scale and reduce its adverse effect upon the broader use of the library. The campaign had various degrees of success and failure. But if I were to begin all over again I would fight even harder. In "real life," as the commencement orators so often refer to the years after graduation, there is no reserve shelf. If we seek to make students into intellectual self-starters, we should inculcate, during college, the habits which will be useful thereafter. (pp. 136-137)

Although Wriston's autobiography was published in 1959, it is difficult to improve upon his assessment today. The results of a 1968/69 study of the use of reserves on the city campus of the University of Nebraska at Lincoln[7] can help, however, to underscore Wriston's conclusions. The results showed that the percentage of titles never circulated rises sharply for lists longer than 20 titles. On the average, a list with one to 20 titles, 33 percent never circulated. Of lists with 21 or more titles, 42 percent never circulated. Experiences of library staffs across the nation would support the tentative conclusion offered by the Nebraska

study "that there is a rather substantial gap between the teaching methods of the professor and what the student reveals to be his study habits."

There are alternatives. For example, the Nebraska study suggested heavy use of paperback books which could be purchased by the students. Such use of paperbacks could allow acquisitions money to be used more effectively in collection building as well as freeing a great many hours of library staff time for other educational duties. Most importantly it would be a way of having students gain experience in using one of the sources of information which will be available to them throughout their lives, i.e., paperback books. It is also worth noting that surrounding students with quantities of paperback books, newspapers and magazines has been documented as having significant influence in motivating young people to read and learn.[8]

Reserves, lectures and textbooks constitute the heart of most college teaching today. An article in Improving College and University Teaching highlights some of the main limitations of this approach:

- adjusting lecture notes or assembling a few ideas from a reserve list into a "research paper" does not lead to critical thought;
- lectures usually present a one-sided view of a subject;
- textbooks do not compensate for the inadequacy of the lecture hall. They may provide a useful outline of a particular subject but are not substitute for the primary literature;
- the effect of lecture-textbook teaching is to divide knowledge artifically into unrelated bits.[9]

These conclusions are not new. In 1937 the Association of American Colleges commissioned a study of libraries and their role in quality undergraduate learning. The study resulted in a publication entitled Teaching with Books which similarly articulates the limitations of the lecture/textbook approach and concludes

> ...these criticisms of the traditional form of American college teaching are now generally recognized. The conventional method tends to make the student responsible to the course rather than to the subject matter of the field, to separate him from the literature of the subject, and to inculcate a deference to the authorities which have been set up, rather than to develop critical discernment and independent judgment. Modification of the system, designed to secure a greater measure of responsibility and independence on the student's part and an adjustment of the program to the differences which exist between individuals, are being effected in many places. These newer educational devices are familiar enough and need not be detailed. They give the student more freedom, make him more responsible for his own education, and endeavor to test more adequately the progress he makes. This means that in place of specific assignments and set lectures, the student is directed to the literature of the subject, and the instructor becomes an aid in acquiring and understanding this knowledge rather than its source and final end.
>
> The trend is thus plainly toward a greater use of books and related materials, rather than less.[10]

While the conclusion that a trend away from the reserves-lecture-textbook approach was underway did not prove accurate at that point in time, it is to be hoped that the current focus on improvement of undergraduate education will result in a fulfillment of that prophecy.

To progress, however, one needs to address the question of why professors are so wedded to reserves, lectures and textbooks. The answer is three-fold: it is what they experienced themselves as students, fear,

and the fact that on most four-year and university campuses the institutional climate continues to favor research as opposed to improving teaching. The faculty perspective in this area is perhaps best presented by writings of a professor. The following is quoted from a speech made by Paul A. Lacey, professor of English and former provost at Earlham College.

> What has been our experience as professors, after all? We have been accustomed to having the toughest courses we took and the toughest we teach introduce the longest list of books on reserve. Our professors gave us fine annotated bibliographies and we may do the same for our students. Often it has been our experience that the most challenging graduate seminars we took specified both the paper topics and the works we were to consult for all but the final paper; and frequently the final paper was an outgrowth of one of the shorter papers we did under instruction. That is to say, our best graduate courses in our discipline, like the best undergraduate courses we expected to teach, gave exclusive attention to mastering the content of major works in our field. Except in the rarest cases we were taught to regard the library solely as the place where all those things should be waiting for us.
>
> I think of my very good experiences with reference services in college and graduate school, but I recall that I, and everyone else I knew, tended to go to the reference desk as a last resort and that I asked questions with no notion that I might learn a generalizable method of research which could help me become more expert in research and conceive of more interesting questions to pursue, either on my own or with the help of a reference librarian. And, I would add, I do not believe I ever thought of a librarian as a teacher until I began to work at Earlham. Except for the most obvious things, such as using the card catalogue and bibliography if I came across one, each piece of study I did through college and graduate school, if it had a research dimension to it, was essentially another hit or miss, hunt and peck activity. I might become more at home in an area, such as the Romantic Period, which is one of my areas of specialization, so I could cover more material in each subsequent piece of study, but I did not know much if anything about how to branch out efficiently into a new area. My independence as a student and as a thinker was consequently very limited, and I didn't even recognize the fact...

> I suggest that my experience is not untypical of both undergraduate and graduate use of the library even now. If I am right in this, it would follow that many of us who are now teaching in colleges and universities are only slightly at home in libraries; and, that being the case, we do not know how to set our students off on interesting and do--able topics which we haven't a dozen times before in our course.[11]

Faculty, who are "only slightly at home in libraries," will have little inclination to encourage students to venture into areas where they feel less than secure. The reserves-lecture-textbook approach to teaching offers a far safer way to proceed in that faculty can limit the information studied to that which they have mastered. There is no danger in this approach to students' being exposed to ideas of other scholars who differ in viewpoint from their own; nor is there quite the same imperative to keep class lectures so up-to-date if students are not being encouraged to familiarize themselves with currently emerging research.

If the desired outcome is independent learners rather than comfortable professors, such faculty need to be encouraged to move beyond the reserves-lecture-textbook approach to becoming facilitators of learning assisting students to make use of the wide range of materials available in and through campus libraries. The challenge is for institutions to ensure that a climate exists on their campuses that encourages such learning and offers incentives for faculty to develop such capabilities.[12]

An Educational Philosophy for the Information Age

The underlying problem confronting education in today's Age of Information is that, given the ever expanding information explosion, to

become an expert in an area requires an increasingly narrow focus to allow subject mastery, while the generalist's knowledge must become increasingly superficial to allow broad coverage. The dilemna is real. The dilemna is known. Yet no articulated educational philosophy currently exists which effectively addresses the realities of the problem. Three elements are essential to an adequate philosophy:

- the half-life of information keeps shrinking; therefore, learning strategies rather than facts should be mastered during college years.

- effective problem-solving is dependent upon an adequate and accurate information base; therefore, learning in college should be structured around information resources that will continue to be available after graduation, e.g., books, magazines, television, and online databases.

- the information basis is constantly expanding in all formats; therefore, students need to develop skills to access, evaluate and judge format suitability of information resources.

The importance of some written campus statement of educational philosophy addressing the above cannot be over-estimated as it should set the stage for academic planning. For over twenty years the serious projects, which have been undertaken on campuses to create an opportunity for students to develop sophisticated understanding of the library and to develop information skills, have met with minimal success at best due to the difficulty in obtaining the commitment of classroom faculty.[13] Campus statements of educational philosophy for quality learning in an Information Age can provide a focus for discussion and curricular change. However, until strong leadership emerges to effect such change--to bridge the gap between the classroom and the library and to have the library viewed as a vital part of the undergraduate experience--it is unlikely that the next twenty years will produce any significant progress from the reserves-lecture-textbook approach.

President Richard Van Horn of the University of Houston, for example, advocates that the kind of learning that takes place in the library should be replicated across the curriculum in order that students gain experience in problem-solving within an unstructured universe such as they will encounter after graduation.[14] Such an approach clearly builds on the philosophical issues that have been raised and addresses the concern that many educators have for the need to see issues in a larger context. The ability to move beyond competence in a very narrow field to being competent within a meaningful perspective, for example, is underscored in the 1986 Carnegie Foundation Report on Colleges and in a speech given at the October 1986 American Council on Education Conference by Ernest Boyer in which he raised the question as to whether the "future of liberal learning now lies not in separating it from the major but better integrating it within the major so that through their specialities, students will start to ask fundamental questions."[15]

Assuming that these opinions reflect a concensus of what the focus should be for quality undergraduate education in an Information Age, then the expanding educational role for libraries would seem unavoidable. If the challenge is to learn how to learn and how to place one's learning within a broader societal and information environment, then libraries and their resources become the logical center for such learning.

Yet it is likely that integration of library-based learning into campus curricula will only take place when testing and credit-giving procedures change. If, for example, Ernest Boyer's suggested outcomes

measurements that focus on integrating learning beyond individual classes are adopted, then the need for students to develop into sophisticated library users or effective information consumers would be essential. In his American Council on Education speech quoted earlier Boyer called for testing students' capacity "to integrate knowledge, to analyze what they have learned and to apply knowledge creatively to contemporary problems."[16] His specific recommendations included: a senior thesis requirement that focuses on some aspect of their major but places it within the larger historical, social and ethical contexts, seminars in which their theses would be orally presented and critiqued and/or senior colloquium series where the theses would be presented in a public forum and discussed with faculty and students. Where this sort of evaluation system is adopted, for the first time a campus-wide imperative would be created for the type of integrated learning experience that would require effective use of the wide variety of information resources available in or through libraries. With such an imperative, motivation would exist for faculty to seriously explore the integration of library-based learning into the curriculum.

Introduction of Library-Based Learning into the Curriculum

An examination of the generally accepted characteristics of quality learning/teaching experiences within the framework of closing "the gap between the classroom and the library" would indicate that the potential value of library-based instruction may be unusually high.

First, a good learning experience imitates reality. Once students graduate, no one is going to stop work to lecture them each time they need to learn something new for their jobs. No one is going to hand them a textbook or reading list. No one is going to put books on reserve for them in the public library. Traditional teaching methods no longer apply.

If, however, while in school, people have gained an awareness of the information resources in their fields, learned how to access them, to evaluate them, and to use them effectively, they will be well prepared for the post-graduation, real-life situations they encounter. Library-based instruction can prepare people to cope with the multimedia and computer information that is so much a part of society today. It can prepare them to screen and employ effectively the mass media that bombards them everywhere they go. Faculty and librarians working together can help students learn how to deal with the realities of the world's vast, multitudinuous store of information.

Second, a good learning experience is active not passive. The lecture method, even if it allows time for questions and answers, does not meet this criterion. It is the essence of passivity. Educators have said for years and continue to say that students should be provided with opportunities to learn by discovery--by developing concepts from specific incidences in varying contexts, by starting with an initial problem and thinking it through to some conclusion. Library or research skills obviously have a part to play in this process. Once students have acquired basic information-handling skills, they can begin to frame questions, to

find the information that relates to these questions, and then to decide what is important or what needs to be done with the information they have uncovered.

Third, a good learning experience is individualized. Young people reach college campuses with a wide range of academic abilities. Open-admission policies, as well as the large numbers of students who have learned English as a second language, have exacerbated the problem. While some differential placement is generally the rule in freshman English and math courses, in other subject areas classes may well contain both academically well-prepared students and those who are almost illiterate in English.

No one instructional approach can be effective with such a wide range of needs. No one textbook or single reading assignment can be effective with thirty students of widely ranging abilities. One way to individualize the learning process is to have students learn from information in libraries and other resources in the wider community. In that way students can deal directly with topics close to their special areas of interest, and materials can be varied to accommodate individual reading levels. By concentrating on magazine articles rather than books, for example, a student with a reading deficiency can find time to go over the material repeatedly until it is mastered.

Fourth, a good learning experience makes provision for a variety of learning styles. Some students learn best by listening, some by seeing,

some in lab situations; some work better in groups and some individually. Once faculty free themselves from the lecture, the textbook, and the reading or reserve lists, and start looking for alternate approaches that utilize multimedia resources, multiple opportunities to learning in a particular area can become a reality.

Fifth, a good learning experience is up-to-date. The rapid obsolescence of most information is well documented. To address this issue, almost every school and college pays at least lip service to preparing people for lifelong learning. Education for lifelong learning begins to become a reality when people acquire an appreciation for the richness and variety of the information base of a discipline and develop basic search strategies for locating and evaluating needed information. Such learning goes a long way toward ensuring that education will not stop once students receive their diplomas, for they will have the skills for accessing and monitoring the changing information base in fields of concern to them. Moreover, such individuals will be far more likely to be active users of public libraries, which have long been responding to nonschool learning needs by providing adult independent-learning programs, reader advisors, reference and online searching services.

Sixth, psychologists tell us that students learn best when the environment is least threatening. Once teachers adopt learning/teaching approaches in which students learn by discovery, by working through a problem, students are relieved of the pressure and fear (real or imagined) of trying to guess what their teachers "really" want. Moreover, allowing

students to learn by exploring a variety of resources can further enhance motivation to learn, because students can perceive (particularly if it is pointed out to them) the relationship between the learning process in which they are engaged and what will face them once they leave school, i.e., the relevance of the learning process to "real life" is greater than in traditional teaching situations.

These six elements of high-quality learning provide a strong rationale for library-based learning, but only when classroom instructors and librarians cooperate in this endeavor can such learning experiences be structured and implemented so as to achieve the best results. To promote such cooperation, a shared campus vision of the implications of the Information Age and a corresponding statement of educational philosophy is important, but even more so is institutional leadership.

Given many professors' predilection to reserves, lectures and textbooks, the initiation of campus-wide information literacy programs and how they are offered depend on the importance academic leaders place on the mastery of such skills and how other basic skills are acquired through the curriculum. The foregoing pages make a strong case for information management learning across the curriculum. For campuses or programs with a commitment to writing across the curriculum, this approach makes a great deal of sense, because information becomes important in relation to a particular need.

Where other approaches to writing competency exists, a parallel for information literacy should be found. For example, at the University of Wisconsin at Parkside competency requirements must be met in four areas before the junior year, one of which is a requirement in library skills and writing research papers. When students cannot pass the competency test, they may take prescribed courses to meet the requirements. Other campuses such as California State University at Long Beach and Wayne State University have built introductions to libraries and information literacy into university-wide for-credit courses which also include introductions to the university, higher education and other learning skills. While not providing enough exposure to ensure information literacy, such an approach does indicate the importance placed on skills by the university, and it does provide a campus-wide foundation for further learning experiences. Whatever the approach, library learning experiences should always be structured so as to infuse the methodology, perspectives, and substance of the curriculum with immediacy and reality. Ideally, cooperation between classroom instructors and librarians plus some good imagination will endue such learning experiences with all the excitement of the detective or trial lawyer seeking the very information needed to solve a front-page case.

Moreover, students need to understand throughout these learning experiences how the skills they are learning can be applied to home and work situations. If they finish their education thinking that libraries are only useful for classroom assignments and recreational reading they are not information literate. Indeed, it is this transferrability that is the

essence of information literacy. If college graduates working in credit departments of a bank do not know to consult library resources when seeking information related to a loan recommendation, those people are information illiterate whether or not they hold a Phi Beta Kappa key.

William H. Harvey, a biology professor also from Earlham College, in a speech underscored the importance of faculty commitment.

> ...the library, through the use of library-related assignments, becomes heavily integrated into the fabric of all the courses in our department. We are a faculty enthusiastic about the value of the library as a focus in our courses and are committed to the needs of students in library usage.
>
> Enthusiasm is a highly contagious disease and it appears that our enthusiasm has paid off; for our students are not only motivated to use our libraries, which of course is the key to it all, but they do so with enthusiasm and skills that I certainly never acquired at the same educational level. It goes without saying that the faculty member is also learning a great deal in the process. For these reasons, I favor course-related library instruction over a separate library instruction course. I believe that the student is more successfully motivated to use the library when library skills are integrated into the curriculum as a fundamental component of the learning process or philosophy of a course. Skills become real for students when relevant examples presented as a demonstration by the librarian can focus reference sources and devices on a specific library assignment. The students' efforts can then result in a definite expansion of the classroom experience that is faculty reinforced.[17]

Because of Earlham College's long term commitment to library-based learning, the campus offers a particularly rich environment for observing such activities and practice. However, examples of discipline specific models can be found at many other institutions. Two University of Colorado faculty members, for example, have spoken at both the state and national levels[18] on their long term commitments to library-based

instruction. CU-Denver chemistry faculty member John Lanning is a proponent of both writing and information management skills across the curriculum and has team taught chemical literature courses with librarians.[19] CU-Boulder theater arts faculty member Richard Knaub has the same commitment but the type of research his students need to do is far removed from that of chemistry journals.

> In an area like theatre, much is audio-visual. What does a Greek chorus sound like? How does the meaning in Shakespeare come through the iambic pentameter when spoken by a master actor?...What was the stage set like in the Broadway production of Mr. Roberts? Who played with Henry Fonda in that show and what did they all look like?...[20]

To cite another example from Colorado, the Department of History at the U.S. Air Force Academy has as a major goal "to develop and to enhance student abilities to use sources of both information and data." At a 1983 conference entitled "A Colorado Response to the Information Society: The Changing Academic Library," Colonel Carl W. Reddel explained how this goal is achieved particularly in the more specialized courses required of the history major where "the link between the history instructor, the student, and the library staff and resources, becomes more explicit and developed."[21]

The purpose of this symposium paper is not to provide a comprehensive list of discipline-related efforts in library-based instruction. The staff of any academic library could locate models in any subject area of interest to faculty. Chances are also good that, on any particular campus, some classroom faculty are already cooperating with librarians in such undertakings so that local models would exist for other departments on

campus. The hope is that these few examples will serve to document that faculty, who become comfortable enough with libraries and librarians to venture beyond the reserves-lecture-textbook approach of instruction to become facilitators of learning through more extensive use of libraries, are enthusiasts for this more active approach to learning and consider both themselves and their students winners in the educational process. Working with librarians, these faculty, and others like them across the country have more than met the educational challenge put forth in the Carnegie Foundation Report on Colleges. They have closed the gap between the classroom and the library. They have made the library a vital part of the undergraduate experience. They have carefully introduced students to the full range of resources for learning. They have given students bibliographic instruction. They have encouraged students to spend significant amounts of time in the library--using its wide range of resources. When one measures the quality of their programs according to the ability of their students' becoming independent self-directed learners, they merit a four-star rating. These faculty and the library-based teaching they represent provide higher education with the needed models for quality undergraduate education in an Information Society.

This paper will constitute part of a forthcoming American Council on Education monograph to be published by MacMillan. It will be entitled The Academic Library: Making the Information Society Work for You.

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